Describing a Regional Emission Reduction Target

Regional Targets Advisory Committee

April 22, 2009

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SB 375 Requires ARB to Set:

'greenhouse gas emission reduction targets for the automobile and light truck sector for 2020 and 2035'

Government Code *§* 65080 (b)(2)(A)

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Building an Emission Reduction Target

Uniform Statewide	or	MPO-specific
Absolute	or	Relative
Reduction from Current Year Conditions	or	Reduction from Future Year Conditions

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Uniform Statewide or MPO-Specific?

Should each MPO get the same target statewide, or should the targets vary by MPO?

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Uniform Statewide Target

Example 1:

*By 2035, **each MPO** region shall reduce emissions below today's levels by **2 MMT***

- This ignores regional differences in at least two ways:
  - –Starting point (existing emissions)
  - –Projected growth rates

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Uniform Statewide Target

Example 2:

*By 2035, **each MPO** region shall reduce emissions below <u>today's levels</u> by **20%***

- Accommodates different starting points
- Current year versus future year problem
  - – A uniform 20% reduction from today is effectively a ton target specific to each MPO

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MPO-Specific Target

Example 3:

*By 2035, the **SACOG** region shall reduce emissions below today's levels by **3 MMT;** the **BUTTE** region shall reduce by **0.2 MMT;** etc.*

- Provides customized targets that reflect regional differences
- Absolute versus relative problem
  - Setting an absolute ton target may limit or ease an MPO's ability to meet target (see next 2 slides)

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Absolute or Relative?

Should a target be expressed as an absolute reduction or a relative reduction?

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Absolute Reduction Target

Example 4:

*By 2035, the SACOG region shall reduce emissions below today's levels by **3 MMT;** the Butte region shall reduce by **0.2 MMT;** etc.*

- Provides a fixed ton reduction target for a specific year regardless of changes in key factors, like population in 2035
- May limit or ease the MPO's ability to meet the target depending on how key factors change

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Relative Reduction Target

Example 5:

*By 2035, the SANDAG region shall reduce emissions by **25%** below 2035 business-as-usual levels*

- Allows the actual tons reduced to adjust automatically as key factors (e.g. population projections) change over time
- Current year versus future year problem
  - –25% below today's levels is effectively an absolute ton reduction target

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Relative Reduction Target

Example 6:

*By 2035, the Shasta region shall reduce **per capita** emissions **by 15%** below today's levels*

- Also allows changes in key factors over time
- Per unit metric creates fewest problems when combined with other choices

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If it's a Relative Target…

What unit should be used…

per household?

per driver?

per capita?

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Per Household

Example 7:

*By 2035, the SACOG region shall reduce **per household** emissions by 25% below today's levels*

- Relies on readily available data
- Requires key assumptions about household characteristics that make regional comparisons difficult, such as:
  - number of households
  - number of people and drivers per household
  - ages, activities, travel modes, etc.

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Per Driver

Example 8:

*By 2035, the SACOG region shall reduce **per driver** emissions by 25% below today's levels*

- Relies on data that may be available, but is not widely used
- Easily comparable across regions
- Ties directly to individual travel behavior

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Per Capita

Example 9:

*By 2035, the SACOG region shall reduce **per capita** emissions by 25% below today's levels*

- Relies on readily available and widely used data that is comparable across regions
- Requires assumption about the ratio between drivers versus non-drivers

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Current Year or Future Year Comparison?

Should emission reductions be compared against current practice today or current practice projected into the future?

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Current Year Conditions

Example 10:

*By 2035, the AMBAG region shall reduce per capita emissions by 15% below **today's levels***

- Requires emission reductions achieved by 2035 to be compared to today's emissions
- Developed based on what is on the ground today in terms of transportation infrastructure, land use, etc.

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Future Year Conditions

Example 11:

*By 2035, the AMBAG region shall reduce emissions by 15% below **2035 business-as-usual levels***

- Requires emission reductions achieved by 2035 with SB 375 strategies to be compared to emissions in 2035 without SB 375 strategies
- Developed based on assumptions about what 2035 would look like without SB 375

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So what are some choices?

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Three Key Decisions

Uniform Statewide	or	MPO-specific
Absolute (ton)	or	Relative (%, per unit)
Reduction from Current Year Conditions	or	Reduction from Future Year Conditions

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Considerations for RTAC Discussion

- Many combinations possible
- The presentation examples explore two initial staff preferences:
  - Current year conditions for comparison
  - Relative: reduction in per capita emissions
- Suggested metrics from this meeting will be applied to actual MPO scenarios for continued discussion at May RTAC meeting

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Initial Staff Preferences

Example:

*By 2035, the MPO region shall reduce **per capita emissions** by X% below **today's levels***

- Per person metrics are easily understood, readily available, widely used, and generally comparable across regions
- What is on the ground today is more certain than what will be tomorrow

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Interregional Travel

How should interregional trips be accounted for?

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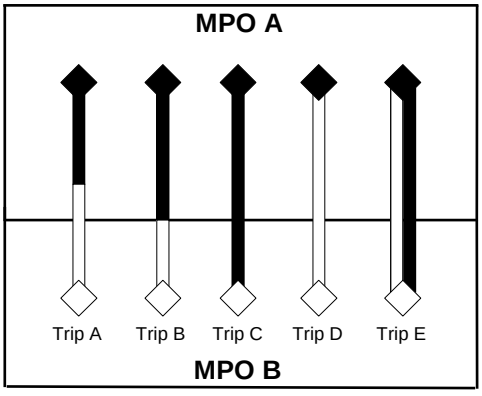
Interregional Travel



Shading corresponds to the portion of the trip included in the MPO target.

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